Chapter 3

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Conducting Operating Practices Inspections Focused Inspections

Situations, which could result in a death, serious injury, or substantial property damage, take precedence over all other inspector duties. An inspector has the responsibility to ensure that unsafe conditions receive prompt corrective action.

Inspectors must have a thorough knowledge of railroad operations in their assigned territory. This knowledge is acquired by studying each railroad's operating rules, timetables, special instructions, general orders, etc. Inspectors must become familiar with railroad operations at all rail yards, terminals, train dispatchers' offices, interlocking towers, locomotive and car department facilities, and hump yard towers within their assigned territory.

In-depth accident analyses are conducted to determine if any laws, rules, or orders within FRA's jurisdiction have been violated and what remedial action should be taken. In addition, inspectors must study accident trends in the inspection territory, especially those attributed to human factors and other operating practices. Information is available for each railroad in the inspector's territory and proves helpful in outlining inspection plans and setting safety priorities. Site-specific inspections should be performed on the basis of each inspector's knowledge of enforcement areas requiring more attention to ensure safety. An inspector's knowledge of each railroad within the inspection territory should determine the types of inspections, which must be performed. For example, if a recent human factors-caused accident was related to improper use of radio communications, concentrated inspections of the railroad's radio operating rules should be conducted.

Railroad Operating Rules (49 CFR Part 217)

Within their assigned territory, each inspector must conduct periodic inspections and observations to determine the degree of compliance with sections 217.7, 217.9, and 217.11, concerning railroad pertaining rules. Inspections or reviews of each railroad's operational testing program and inspection program must be conducted to determine employee compliance with railroad operating rules. Inspections must also include each railroad's program of employee instruction on operating rules and the adequacy of the recordkeeping required for both programs.

Inspectors must determine the location within their assigned territory where railroad files and records are maintained and review the records to determine adequacy and compliance.

The inspector must not actively conduct or participate in railroad testing procedures. The inspector may evaluate the adequacy or effectiveness of an operating rules instruction program by attending an instruction program. Inspection activities must never pre-empt or interfere with a railroad's operational prerogatives.

An audit plan for performing efficiency tests (records and field tests) follows:

Operational Tests and Inspections

Program Audit

49 CFR 217.9 Railroad Program of Operational Tests and Inspections: It is the responsibility of the railroad to determine if employees are complying with the rules through appropriate surveillance and performance tests. The OP Inspector monitors the railroad's efforts by inspecting pertinent records and may, on occasion, accompany railroad managers when efficiency tests are conducted.

One duty of the OP Inspector is the observation of railroad managers who conduct tests. This is not to form a basis for employee disciplinary action or to criticize the railroad's manager for deficiencies in the program, but to impartially and objectively assess the railroad's efforts to develop and maintain a suitable safety program.

Recordkeeping: Each railroad is required to conduct operational tests and inspections of its employees to determine the extent of compliance with its Code of Operating Rules, Timetables, and Timetable Special Instructions in accordance with a written program, which is retained at its System Headquarters and the Division Headquarters for the railroad division where the tests are conducted.

Team Leader/Inspector in Charge of Audit: The following guidelines should be followed to conduct a Team Inspection audit of a railroad's Program of Operational Tests and Inspections (OPTI) on the railroad to which you and your team have been assigned.

Contact a senior railroad division manager for the railroad division to which you have been assigned at least two weeks in advance of the inspection activity and request the following:

1. Request a copy of the railroad's OPTI Program.

2. Request a copy of the railroad's guidelines or standing instructions for conducting operational tests by its managers or officers. Identify the monthly number of tests per manager or officer, frequency and distribution of test times required by the railroad's program.

3. Request the railroad or division furnish a list of all officers or managers who are required to conduct operational tests, their titles, and where they are headquartered.

4. Request the railroad furnish a copy of a printout of all operational tests conducted for the time period to be inspected. The record should be available on the date selected for the team's inspection.

5. Arrange for a location for conducting the team's records inspection.

6. Request a designated officer or manager who can answer questions regarding the railroad's program or recordkeeping system.

Inspectors Assigned to Team: Upon arrival at the assigned railroad division for the operational testing audit, the inspector in charge should have all the records and programs, which are required to conduct an audit of the railroad's program available. Each inspector should review the railroad's program and requirements for the railroad's officers or managers to conduct tests, and the number of tests required by each testing officer or manager. Inspect each manager or officer's records of operational tests for the time period identified to determine if testing was conducted in accordance with the railroad's written program. Ideally, this inspection activity should cover a one-year period to determine if each officer or manager conducted the required number of tests each month as required by the railroad's program. If the

number of tests required was not achieved by each individual officer or manager, or he or she failed to comply with railroad requirements, such failure should be recorded as a deficiency. Count and evaluate the tests reported by each officer or manager. One testing session conducted by an officer or manager may result in numerous different tests reported on the same crew; this should not be counted as individual tests in order to "pump up" the recorded tests. Try to identify valid tests conducted in the field as opposed to tests which may have been conducted "at the desk" in the manager's office. The following may help identify valid tests, and tests which were fabricated in order to meet a monthly quota:

1. Total number of tests-be alert for outrageous numbers reported by an officer or manager.

2. Look for a pattern where tests are regularly conducted at the same location.

3. Elapsed time between tests conducted on the same calendar date (inspectors have found tests recorded by a testing manager a few minutes apart - at locations 80 or 90 miles distant from each other).

4. Same crew tested day after day, especially at the same location each time a test is performed.

5. All tests are conducted within yard limits, all tests reported are signal tests, all tests are observations, all tests are set up tests, numerous tests are reported at the same location.

6. Be alert for two officers who can be identified as testing together on the same date and location, when both officers claim credit for conducting the same tests on the same crew members.

7. Try to determine if the tests conducted appear to be meaningful, or appear to be "filling in blanks."

8. Identify and inspect tests reported by Designated Supervisor of Locomotive Engineers (DSLE) or road foremen of engines. The inspection should try to identify if they are reporting set-up tests, observation tests, or those conducted during onboard train inspections or qualifying trips with locomotive engineers. When a DSLE is riding with a train crew, he or she should not count tests as unannounced or record a broad variety of tests inappropriate for the activity.

9. Note whether any tests reported by field officers or managers in the field were conducted on train dispatchers. Train dispatchers are frequently excluded from testing because they are managers, or to avoid interference with railroad operations. Report a deficiency, if records indicate train dispatchers have been excluded from the testing program.

10. Check for operational tests conducted by chief train dispatchers, assistant chief dispatchers, or managers in charge of dispatching operations. If the train dispatching office is located outside the division where you are working, obtain a copy or record of any operational tests reported on this division by dispatching center managers or supervisors.

11. Qualifying engineers under 49 CFR Part 240.303© - Check operational testing program records for tests conducted by managers or officers in order to comply with regulatory requirements for one unannounced test each calendar year. This program shall:

    A. Test engineer compliance with one or more provisions of the railroad's operating rules that requires a response to signals that display less than a "clear" aspect.

    B. Evaluate tests recorded to see if they are properly categorized as set-up tests. Observation tests and set-up tests are not the same. A set-up test should establish a restrictive condition, which would not otherwise exist if it were not for the test. Otherwise, tests should be categorized as observation tests.

12. Railroads that operate jointly with another railroad on their own trackage should actively conduct tests on the other railroad's train crews, and conduct joint test sessions with managers of the

other railroad. Inspect for tests conducted by the host railroad on the other railroads' trains, including Amtrak operations. Determine if the host railroad is properly reporting test results; particularly test failures, to the other railroad.

Field Inspections: At the conclusion of the records inspection, a field inspection of the performance of operational tests is required to determine if testing is conducted in accordance with the railroad's written program. If you have found a pattern of questionable tests by individual managers or officers, ask to accompany the individual(s) identified during a testing session. Observe the methods used when the officer or manager sets up tests, how skilled he or she is when using track shunts, what testing equipment he or she has, and how the equipment was used. If the officer is conducting signal tests, note whether or not a qualified signal maintainer is involved when conducting tests at interlockings or when tests involve disabling a component of the signal system or its appliances. Each inspector should arrange to observe testing sessions or trips with a division officer whose test records he inspected. The number and types of tests to be conducted, or period of time spent in the field, should be determined in consultation with the team leader and should be representative of each testing officer's typical testing session.

Conclusion of Inspection: Inspectors should communicate with the team leader daily, utilizing their laptop computers where appropriate, so that at the end of the inspection activity, each inspector can furnish the team leader their findings, to be incorporated into a final report for the railroad or division. Inspectors should also prepare inspection reports daily, recording their inspection activity findings and deficiencies, if any, for delivery to the railroad and to the team leader. Team leaders will prepare a final report for submission to the Regional office, to include a summary of the team's activities, and any appropriate recommendations to be presented to the railroad at a closeout meeting conducted at the conclusion of the inspection activity.

Use of Radar Guns by Inspectors

FRA and State inspectors historically have had access to radar guns, Operating Practices Inspectors have routinely employed the units to monitor train speed for purposes of evaluating compliance with FRA safety standards such as those found in Part 218 (Yard Limit Rule). As the result of heightened concern about compliance with limitations on train speed attributable to enforcement of the locomotive engineer certification program, FRA can anticipate that challenges to FRA speed data predicated on use of radar guns will occur. Moreover, there is reason to think that these challenges will be made in a formal adversarial setting such as in front of an administrative law judge or a Federal court. Such challenges could easily come either in the context of a decertification appeal or as part of a disqualification proceeding. It is important that FRA ensure that inspectors' use of radar guns will withstand such a legal challenge. To accomplish this, the Office of Chief Counsel recommends adherence to the following practices:

1. Selection of Radar Guns:

FRA's choice of units should be limited to those identified on the consumer products list (CPL) issued by the International Association of Chiefs of Police (IACP).

2. Calibration Procedures:

Radar guns need to be calibrated on both a periodic and on a daily basis.

a. Periodic Testing:

All radar units should be submitted to appropriate laboratories for recertification testing every two years, or after the unit has been opened for repair. Tuning forks should be certified as accurate each year. One option would be to access the IACP's service for such periodic tests. This service entails payment of a minimum fee. Details can be obtained by calling the IACP at 703-

836-6767. Another option may be to have a cooperative state policy agency do the testing if it is equipped to do that for its own units. A written record of all laboratory service and repairs should be maintained at the regional office.

b. Daily Testing:

All safety inspectors must strictly adhere to manufacturer procedures for on-site calibration checks of these radar units. At a minimum, the procedures for actual day-to-day use of these guns should include a calibration check of the radar unit utilizing two tuning forks or a tuning fork and the unit's internal calibration methods. On-site calibration checks both before and after use of the unit are strongly recommended. Inspectors should keep a written record of this testing.

3. Training for Inspectors:

All inspectors need to be given appropriate classroom training regarding the use and limitations of radar speed measurement and the mechanics of using a radar gun. The National Highway Traffic Safety Administration (NTSA) has a suggested course for Basic Training in RADAR Speed Measurement that can be adapted for FRA use. It is strongly recommended that any FRA course include supervised field performance tests, allowing inspectors an opportunity to demonstrate their competence with the radar unit prior to using it for enforcement purposes.

An audit plan follows for the conduct of onboard train inspections:

Onboard Train Inspections

Authority of FRA Inspectors to Conduct Onboard Train Inspections

49 U.S.C. § 20101 (formerly the Federal Railroad Safety Act of 1970, hereinafter "the Law").... gives the Secretary of Transportation the authority to prescribe regulations for and to conduct evaluation of all areas of railroad safety. To carry out these broad duties, the Secretary's employees are given the power by 49 U.S.C. § 20107 of the Law to enter upon, inspect and examine rail equipment, rolling stock and operations. FRA believes, in this context, train-riding inspections should be conducted in a manner, which will not be disruptive to the operations to be observed. FRA does not intend to interfere with those operations.

The primary purpose of an FRA inspector's onboard train inspection is to evaluate compliance with Federal safety standards and railroad operating rules by railroad employees. Although 49 CFR Part 217 does not provide the ability to file a violation report for failure to comply with railroad operating rules, a non-compliance may be reported to the railroad as a deficiency under 49 CFR Part 217 and the applicable railroad rule. FRA's authority to conduct inspections is not limited to detection of violations. Rather, as discussed above, that authority extends to evaluation of all areas of railroad safety, and is especially broad with regard to those aspects which FRA finds to be "in need of prompt attention," 49 U.S.C. § 20104.

Avoid Disruption of Operations

Railroads have expressed concern that FRA inspectors may distract train and engine crews by riding trains. FRA does not intend for its inspectors to offer criticisms or advice on the crew's handling of the train or compliance with operating rules. As for conversations or inquiries during the inspection, FRA inspectors experienced in railroad operations refrain from saying or doing anything, which might distract the crew from their duties. Railroad supervisory personnel frequently ride trains for inspection and observation purposes, without a detrimental effect on crew performance.

If a crewmember violates (or is about to violate) a Federal regulation, it is the inspector's responsibility to inform the crewmember of the requirements of the Federal regulation. In essence, this is a verbal warning possibly leading up to individual liability if not acknowledged by the crewmember.

Advance Notice of Onboard Train Inspections and Signing Waivers of Liability

Railroads, in the past, have asked FRA inspectors to sign Waivers of Liability or provide advance notice of their intention to inspect prior to conducting onboard train inspections. FRA cannot condone the setting of any preconditions to its entry onto a railroad's property for official purposes. Therefore, FRA is not legally compelled to waive liability or provide advance notice of inspections made for official purposes. FRA inspectors may give the railroad notice of their intention to ride trains in the majority of cases. However, a situation may arise in which FRA decides that an unannounced inspection is necessary to determine the degree of compliance with the railroad's operating rules or with Federal regulations. FRA would vigorously oppose any railroad's attempt to prohibit its inspectors from riding a train on such an occasion.

In most cases, an inspector will give the railroad advance notice of their intention to ride a train. Some railroads have a policy that a railroad manager accompanies an inspector during an onboard train inspection. FRA does not take exception to this as long as the absence of a railroad manager does not interfere with an inspector's intention to ride a train.

Safety Equipment

Inspectors who perform an onboard train inspection shall be equipped with all safety equipment required by the railroad for train crews. This is to include safety glasses with side shields and lace up boots where required. Inspectors also should have the applicable rule book(s) and timetable/special instructions in their possession for reference during the onboard train inspection. Determining what safety equipment is required should be part of the inspector's preparation for the train ride.

Calling Signals

Inspectors are reminded that their role is that of an observer and that they should not participate in activities construed to be duties of crewmembers, i.e., operating locomotive, operating switches or calling signals. If an inspector is questioned about not participating in such activities, he or she shall explain the purpose of the inspection is to monitor compliance, not participate as a member of the crew subject to railroad rule requirements.

Preparation For Onboard Train Inspections

Inspectors should:

Determine what safety equipment is required by the railroad for its crewmembers and make sure they have the required equipment.

Determine which train they will ride. In making this determination, the inspector may elect to ride a specific type of train, or may leave it open to chance, depending on his or her objectives. The inspector may want to obtain a lineup and/or have a discussion with a railroad manager to find out what trains usually run during the period of time you wish to ride a train, or contact a chief train dispatcher for the expected arrival/departure times of through trains. This is also a good way to provide the railroad with informal notice of your intention to ride a train.

Read and be familiar with all General Orders, Notices, and Special Instructions that pertain to the territory over which the train ride will take them.

Read and be familiar with the railroad's operating rules, timetable, and railroad safety rules. The inspector should have a copy of these publications with them while performing the onboard train inspection. If the crew will operate over a foreign railroad, obtain a copy of that timetable also. The operating rules should also specify what materials the crew is required to have in their possession during operation of the train.

Ensure the operating rules contain the minimum operating rules, including the required provisions, for blue signal protection (including provisions for utility employees where applicable), yard limit rule (if railroad has yard limits), flag protection rule (if operating methods are such they continue to have a requirement for flag protection), radio rules (if railroad uses radios), and an alcohol/drug prohibition rule.

Introduce yourself to the train crewmembers, upon their arrival. Identify yourself with either your credentials or with a business card.

Check the mandatory directives [i.e., Train Orders/Track Warrants, Track Bulletins (all forms)] issued to the train crew, for accuracy. Per Part 220, Railroad Communication, make sure the conductor and engineer each have a written copy and that the mandatory directives are read and understood by other members of the crew (mandated for all mandatory directives issued over the radio). NOTE: Even if the conductor and engineer are both in the lead locomotive, they each need their own copy of the orders.

It is a good idea for the inspector to request a copy of the mandatory directives also. However, there is no Federal requirement that the railroad provide you with a copy. If you do not have a copy of the mandatory directives, copy them down on a sheet of paper or on the Train Ride Checklist form.

Check the train consist list for proper train makeup, per any railroad or timetable special instructions. NOTE: There are no Federal regulations governing train makeup, except for train placement of certain hazardous materials cars.

Check the train profile (if applicable). Typically, a train profile portrays the location of cars requiring special handling and a visual profile of car tonnage; and the actual weight of each car in the train along with tons per operative brake, specific order of cars entrained, train length, and the location of hazmat cars. If a railroad utilizes a train profile graph, contrast it with the train consist list (and if time permits, with the actual observed cars in the train) to determine the relative accuracy of the train profile.

Check the crew's paperwork for proper HAZMAT placement, and proper shipping papers for cars containing HAZMAT. While Hazardous Materials Inspectors are responsible for Parts 100-179, OP Inspectors should be familiar with those parts pertaining to car placarding, shipping papers, and car placement.

Check crewmembers for possession of required operating rulebooks, safety rules, air brake and train handling rules, and current applicable timetables for their territory (some may operate over joint trackage rights territory).

If the crewmembers are required to know the latest General Order or have the General Orders in their possession, or know the Safety Rule of the Day, check for compliance with these railroad requirements.

Inspect locomotive engineer's certificate for compliance with Federal regulations. Make sure the engineer is qualified on the territory to be operated over. If the engineer does not have his certificate with him, have the engineer talk to a railroad officer and get a replacement (temporary) certificate.

Check for compliance with the alcohol/drug prohibition rule. If an inspector observes that one of the crewmembers is potentially impaired or impaired by alcohol or drugs, take the other crewmember (or railroad manager) aside, and advise him of your specific, objective observations. An acceptable statement would be, "I smell alcohol on the engineer's breath." An unacceptable statement would be, "I think the engineer's drunk." If an inspector is already onboard the train, he should ask the crewmember to make an observation and ask him to use the radio to request the appearance of a railroad manager on the train (prior to departure).

During the Onboard Train Inspection

Inspectors should**:**

Observe all air brake tests performed on the train, if possible. Stay on the locomotive and observe the engineer's compliance with the air brake rules. If the air brake test was conducted by the mechanical department prior to the crew's arrival, check the form provided to the engineer. Make an inspection of any blue signal protection provided by workers, during required train air brake test.

Check daily locomotive inspection records for compliance.

Make observations to determine compliance with 218.37 (flag protection), check for required flagging supplies (torpedoes, fusees, and red flag and/or white light). The Federal regulation does not specify an amount of flagging supplies. The specified requirements are found in the railroad's operating rules.

Observe crew for rules compliance of all railroad operating and safety rules, and Federal laws and regulations, including use of required personal safety equipment.

Make observations to determine compliance with 218.35 -Yard Limit Rule. While riding the train, observe the physical location of yard limit signs and determine if these locations are the same as those outlined in the timetable, special instructions, or other publications.

Make a Rear End Marking Device inspection for the train you are on and also on other trains while en route, as applicable (hours of darkness). Check for other markers on train if required by railroad operating rule, i.e., red flag during daylight hours.

Inspect for a properly working radio, and monitor radio use for compliance with Part 220 and the railroad's radio rules. Inform the crew that you will be monitoring radio communications for purposes of radio rules compliance. Ensure that an employee operating the controls of moving equipment does not receive and copy mandatory directives over the radio.

Inspect locomotive safety devices for evidence of tampering, e.g., micro switches on alerter wiring; flagstick holding deadman pedal depressed; pencil holding deadman pedal depressed on electric control cab units; string attached between windshield wiper handle and alerter toggle switch. NOTE: Although not a stated "safety device," the inspector should observe the independent brake handle for blocks and coins used to hold the handle in the depressed or "dumped" position. This is not an acceptable practice and is prohibited by most railroads in their air brake and train handling rules.

Be familiar with the event recorder requirements on locomotives required to be equipped (229.135) (even though the MP&E discipline has the primary responsibility for this regulation).
Make observations whether a crewmember makes the required speed indicator test as soon as possible after departure by means of speed test sections or equivalent procedures.

Be familiar with the two-way end-of-train telemetry device requirements on certain trains and ensure the required tests are performed (even though the MP&E discipline was the primary responsibility for this regulation). If anyone other than a crewmember performs these tests, the engineer has to be informed that the test (both front and rear device) was successfully performed. This can be either written or verbal. This could also be relayed by a third party who knows that the test was successfully performed.

Train Ride Check List

The enclosed Train Ride Check List, or similar checklist may be used during train riding activities. The information contained on the form can be a useful tool in completing the inspection report at the end of each train ride or crew change. With each crew change, or State line crossed, the inspector is required to generate a separate inspection report, and the Train Ride Check List, contains essential information to include on the inspection report.

Follow-up After Onboard Train Inspection

An inspection report should be completed for each onboard train inspection. If a deficiency is noted for railroad operating rules, or safety rules, or if a violation of Federal regulations or laws is to be filed, these findings should be communicated to a railroad manager as soon as possible. Appropriate copies of the completed inspection report, FRA Form 6180.96, should be left with a railroad official at the conclusion of the inspection, when practicable. Copies of inspection reports may be mailed or sent by facsimile delivery to the appropriate railroad official

NOTE: Should such violation or deficiency be of a nature that requires prompt corrective action for compliance (e.g., engineer with a non-complying engineer's certificate, train with inoperative two-way end of train device, or missing rear end marking device), inspector should take appropriate action to notify the train crew, a railroad officer or manager, or train dispatcher when non-compliance is discovered during the inspection.

(Insert train-riding checklist)

A work plan follows for conducting assessments at a train dispatcher's office:

Train Dispatching Office Assessment

Work Plan

Scope: Although every effort has been made to provide guidelines and instructions which are clear enough to promote uniformity, understanding and consistent application of the regulations, it must be recognized that each Operating Practices Inspector must exercise a high degree of independent judgment in individual situations. Therefore, prior to conducting an audit/inspection, the inspector should contact the local labor representative (if applicable; some dispatcher staffs are non-union) and determine if there are any problems associated with the dispatching office.

Resource Material

When performing a train dispatcher assessment the following documents are available as a resource in determining what areas of concern and deficiencies were found on the nations railroads during these earlier assessments. All of the documents were products of the Office of Safety Assurance and Compliance.

- National Train Dispatcher Safety Assessment 1987-1988: February 1990
- Train Dispatcher Training Standards Inquiry - Report to Congress: May 1990
- Train Dispatchers Follow-Up Report - Specific Railroad Findings: September 1994
- Train Dispatchers Follow-Up Review - Report to Congress: January 1995

Examine the following:

- Staffing (insufficient staffing may effect workload stress and fatigue).
- Communication devices and procedures.
- Training, duration, content and methodology for both new-hire and continuing education.
- Determine workload, including: total track miles handled, train density on territory, number of mandatory directives issued and administrative duties.
- Examine operational testing records (testing should be conducted even if the office is non- union) and determine if the tests relate to dispatcher functions and are of substantive nature. Tests should be placed on a matrix to determine that they are performed around the clock, throughout the month and over the spectrum of dispatcher duties. Determine if the dispatcher is notified of results of operational tests and if discipline policies are appropriate. It is the railroad's responsibility to ensure that employees are complying with the rules through appropriate surveillance and performance tests.
- Hours of service records should be inspected for recordkeeping requirements, and to ascertain compliance with 49 U.S.C. § 21105.

Software content should be investigated to ensure that the software does not create any problems that impede safety. Software implementation procedures should be examined to determine that the

procedures do not pose additional threats to safety. Determine if the software is checked prior to being placed into actual service.

Train Dispatcher Compliance Review Format

Each team leader should perform an FRA team briefing prior to beginning the compliance review. At this meeting the team leader will inform team members of the objectives of the review and give working group assignments. The team leader will also cover protocols and working expectations at this meeting, e.g., all problems to be addressed with the railroad will be funneled through the team leader. This organizational meeting is essential to achieve a professional and efficient team compliance review.

The team leader should have already arranged a " brief- in" meeting with railroad and labor groups. The purpose of the brief-in meetings is to inform our partners of the objectives of the compliance review. Additionally, this is the format for achieving cooperation and identifying concerns that may be relative to the review.

Team leaders will be responsible for submitting detailed narrative reports, inspection reports, and computer files to the Audit Project Manager no later than 10 days after completion of the field activities. Team leaders will make specific reporting assignments, including time frame expectations.

Team assignments will vary to meet the needs of the specific review, but listed below are teams to which an inspector might be assigned:

Desk Reviews

Records Inspections

Emergency Response

Work Load and Stress

Signal and Train Control

Training (New-Hire and Continuing Education)

Operational (Efficiency) Testing

Staffing

Software

Communications

Rules Compliance

Corporate Organization (Culture)

Concerns of Employees (Focus Groups)

After an assignment has been completed, team members should report to the team leader for a new working group assignment.

The following are guidelines an inspector should consider in completing working group assignments. As with all inspections performed in OP, the investigation may involve future follow-up investigations.

Staffing

Conduct an evaluation of staffing practices. This will include consideration of any (railroad) audit procedures in place to periodically review the current workload and implement changes where necessary. Specific staffing determinations should include but are not limited to the following:

1. Evaluate the railroad-staffing model. Determine if the staffing allocations appear to be adequate by considering each extra-board area of responsibility for:

    a. Projected vacation schedules (raw numbers)

    b. Off assignment, or other predictable staffing considerations

    c. The number of extra dispatchers available to cover assignments

    d. The number of districts extra-board dispatchers is able to protect, and which districts they are qualified on

    e. Extra-board staffing sufficient to protect unforeseen vacancies

    Determine if the railroad is meeting its staffing model, and what actions it is taking to ensure that they will continue to meet staffing allocations. Good indicators that the staffing model may be deficient are heavy over-time, job consolidations, working districts dispatchers are minimally qualified on, violations of the hours of service laws, and extensive rest-day work by the dispatching staff.

2. Has the railroad increased or decreased staffing levels? If so, how much and what criteria was used to determine the change?

3. Has the dispatching center management developed databases to assist them in decision making processes and do they include all information necessary for decision making? Is the information readily retrievable and formatted into quality reports?

Workload and Stress

1. Evaluate the dispatcher positions to determine the workload by considering among other things:

    a. The number of mandatory directives issued on a shift (i.e., Track warrants, DTC authorities, Track and Time Permits, etc.)

    b. The number of control points under the dispatcher's command

    c. The number of interlockings under the dispatcher's command

    d. Administrative and miscellaneous duties required

    e. The number of miles and trains under the dispatcher's command

    f. The types of operating authorities on the district

    g. The adequacy and configuration of the communications systems

    h. The ease of dispatcher interface with computer software or other operating systems employed by the dispatcher.

2. Evaluate the amount and reason for extensive overtime and determine if overtime, combining positions, dispatchers' working districts they are minimally qualified on, violations of the hours of service laws, and extensive rest day work by the dispatching staff are impacting workload and stress factors.

3. Are track maintenance authorities (i.e., Track Bulletin Form B) scheduled ahead of time or are first trick dispatchers required to communicate with each MOW employee requesting authority and then required to react to each instantly? If the railroad contends they are pre-scheduled, obtain documentation.

4. Determine if dispatching center management has the authority and capability to evaluate workloads of dispatchers and reassign administrative duties to staff support personnel (either assistant chief dispatchers or clerical employees). Also, determine if they have the authority to recommend that functions currently handled by dispatching center personnel be transferred to other departments. Examples of this could include initial computer input of train number, train crewmembers, consists, locomotives, on-duty times, off-duty times, etc. Obtain documentation regarding evaluation.

5. Who is involved in the decision making process regarding the sizes of dispatching districts? Is there an on-going evaluation process, and if so, who is involved? What procedures would be necessary to amend initial staffing plans?

6. Obtain copies of computer generated reports which assess dispatcher time and motion.

7. Are extraneous duties adequately delegated to support employees such as assistant chief dispatchers and clerical staff?

Many of the tasks outlined above can best be accomplished by coordinating with the desk review team or the staffing team.

Corporate Organization

1. Develop information concerning changes in the organizational structure. Include any dispatcher position consolidations. Identify the relationship between the dispatcher's office and the system and operating divisions. Determine if the dispatching center has a system level officer reporting directly to the Vice President Operations with responsibility for review and development of train dispatching functions. Obtain all organizational structure charts related to the dispatching center.

2. Are there formal meetings, safety committees, or safety suggestion formats to discuss safety and environmental problems? If so, are formal reports prepared and forwarded to senior level officers, and are results of the railroad's response returned to the concerned individual?

Software

1. Evaluate software used at the dispatching center to determine:

    a. Are there any locations where software functions, or oversights generate safety concerns?

    b. How is blocking accomplished, and does the blocking affect field signals?

    c. How does the software affect safety in areas of adjoining dispatcher districts?

    d. How often is the software upgraded?

e. Is new or altered software run on an inactive position to check for accurate function before it is put on-line?

f. Evaluate the ease with which the dispatchers interface with the software.

2. Is the software designed to relieve the dispatcher from manually verifying qualifications of employees operating on the main track? If so, does this include foreign-line employees? If not, how does the railroad determine qualifications of these employees?

3. Can the computer track times of incoming and outgoing communications initiated, answered, and terminated?

4. Does the computer track the times that all computer assisted dispatcher inputs are initiated by the dispatchers.

Signal and Train Control

Where the objectives of the review require, Signal and Train Control Inspectors will be included on the review team. This work group is helpful in evaluating data and voice communication systems used by the operating department, establishing the relationship between the dispatcher operating system (usually the computer) and the signal system, and answering signal related questions generated in the partnership meetings. This will include computer assisted dispatching, radio communication, printers and other devices used for transmissions of safety sensitive information. Items to be evaluated include, but are not limited to:

a. Is a complete diagnostic program built into the computer? If so, what are the capabilities? Is the diagnostics check strictly for computer hardware, or does it include data input cross checks?

b. Has the railroad corrected any program flaws identified during previous audits?

c. Examine computer back-up systems and operating practices plans in place to address the contingency of computer failure or power outage.

d. Examine the computer assisted dispatching system to determine if areas of overlap, or "dual control" exist among dispatching districts. If they do exist, what procedures are in place to ensure the safety of on-track equipment?

e. Examine the use of electronic "blocking devices" and the effect of the system in practice. Because computer assisted dispatching systems display an office indication instead of the actual track circuit indication of the older technology applications, a thorough evaluation of the modes used for electrical transmission, interface, and data communication will be necessary. This will include the capabilities, if any, of the system to re-transmit data at pre-established intervals.

f. Software must be evaluated for all control systems including but not limited to track car movements, Track Warrant Control, Train Control Systems, and Direct Train Control Determine if conflict-checking capabilities are complete.

g. Determine what happens in double track ABS territory when movements are made against the current of traffic. Does the computer color code the train and/or on-track equipment movements? How is protection established?

h. Determine if there is a problem with the computer-assisted system, the code generator, or the communication system generating un-requested (by the dispatcher) signal or switch codes.

i. Determine the process for transmittal of mandatory directives. Evaluate the capability of the system, including printers and facsimile machines to provide a 100 percent secure data transfer.

Communications

In conjunction with the desk audit team, this team will also evaluate the radio and telephone communication systems to determine if the capabilities and actual performance of the system is adequate. The desk audit team will notify the data communication team of any functional problems observed during monitoring of the shift dispatcher positions. The primary concerns will be:

a. Locations severity and safety impact of dead spots.

b. Locations where radio congestion impacts safety.

c. Dedicated emergency lines and procedures.

d. Back-up systems to deploy in case of failure.

e. Noise levels and the quality of transmissions.

Training

Currently, the dispatching force nationwide is experiencing a great amount of turnover. With this turnover, and with the current technology explosion, it has become increasingly important for FRA to monitor and make suggestions in the areas of training and recurrence training of dispatchers. The training team should evaluate at a minimum:

a. The program the railroad has in place for the training of non-railroad experienced new-hire dispatchers, railroad experienced new-hire dispatchers and dispatchers that have experience on other railroads.

b. The program the railroad has for providing training on new equipment, software changes, and changes in operating systems.

c. The training provided dispatchers to facilitate continuing education.

d. The training and qualification requirements for extra-board dispatchers, including district familiarization.

e. The training plan in effect to familiarize dispatchers with the physical characteristics of the territories, including road trips and/or video road trips.

f. Determine class duration and frequency by which dispatchers are trained and tested on operating rules and evaluate the process. (including content)

g. Evaluate the training given to dispatchers on Federal regulations.
Evaluations of the dispatcher efficiency test records, accident records and desk audits are helpful in evaluating the effectiveness of the training systems.

Operational (Efficiency) Testing

Evaluate the entire operational testing program as it relates to train dispatchers. Review the format of data to determine if it is adequate for proper management of the program. Determine if the program

meets the requirements set forth in 49 CFR Part 217. Evaluation of the program should include but is not limited to the following:

a. Obtain copies of any computer generated reports provided to railroad management on a periodic basis. Review the reports to determine if the format provides management with a good overview of the program as well as the existence and extent of problem areas.

b. Determine if the dispatcher or dispatching center management is made aware of operational testing done on dispatchers by field officers.

c. Determine if the program provides for testing and inspection under the various operating conditions of the railroad. This will probably require detailed analysis, or matrixing of the data to determine that tests are done around the clock and throughout the month.

d. Evaluate the quality of the tests by noting what rules are tested. Look for patterns in each supervisor's tests to ensure that tests are for various rules and that the tests are meaningful in content.

Records Inspection

This team is responsible for reviewing compliance with 49 CFR Part 228 as it applies to train dispatchers. An inspector may copy, or request that the railroad furnish a copy of the electronic hours of service records. Under no circumstances should an inspector remove original records from the railroads property. Records to be inspected should include, but may not be limited to:

a. Excess service reports (F6180.3)

b. Train Dispatcher's Record of Train Movements

c. Train Dispatcher's Hours of Duty Records. Pay particular attention to ensure time spent performing random toxicological tests, railroad interviews, and mandatory rules classes is included as on-duty time in the records. Additionally, extra dispatchers' Hours of Duty Records require more attention. (Be careful to note that Hours of Duty in a dispatcher's office requiring only one shift is limited to 12 hours instead of the traditional 9 hours.)

d. Unusual occurrence reports. A good technique is to compare accident/incident and trouble log notes to the unusual occurrences section to assure events are being correctly entered.

e. Maintenance trouble logs or reports including computer, signal and communication failure reports and corrective actions taken

f. Mandatory directive authority records

g. Blue signal protection records for remotely controlled switches;

h. Injury/illness records for the dispatching center;

i. Hazardous materials incident reporting procedures and records;

j. Interoffice bulletins and notices. Evaluate to determine if the process complies with railroad operating rules and instructions.

This team will conduct the excess service evaluation first and report their findings to the team leader for further analysis.

Emergency Response

This team will review railroad accident/incident emergency response procedures including intra-office emergencies, with emphasis on passenger operations and hazardous materials. Evaluate the program to determine that a system is in place that will provide adequate response to emergencies by reviewing the following:

a. Does the railroad have a system that provides field personnel the ability to gain immediate response from the dispatcher or other central figure (i.e., a dedicated hot line)?

b. Does the railroad have an emergency plan in place that outlines what the dispatchers' steps are for handling various types of emergency?

c. Does the dispatcher have at hand an up-to-date list of names and telephone numbers of persons and emergency response agencies that will be asked to respond?

Desk Review

There are two ways to accomplish this task. Both have value depending on the focus of the review. One method is to carefully review selected segments of the voice recordings from the dispatcher position. The other method is to monitor a dispatcher actually performing duties. The inspector should have knowledge of the rules and the method of operation on the territory being monitored. Information formulated by this work group will determine compliance with rules and Federal regulations and will interface to work done by most of the other teams. Dispatchers are often questioned regarding training, communication problems, software problems, operational testing, etc. to determine if the programs are effective at the dispatcher level. Inspectors should accomplish tasks on this team by:

Tape Monitoring Approach

a. Have the railroad prepare segments of voice tape for the positions you are to monitor. The inspector should select the actual times and positions of interest to prevent the railroad from influencing the review.

b. Obtain copies of mandatory directives issued during the time that corresponds to the voice tape segment. The inspector should monitor the dispatcher's transmission of the mandatory directives, and the read-back from the copying employee to assure they are correct.

c. The inspector then listens to the voice tape, taking care to produce inspection reports on Federal regulations and rules compliance. Additionally the inspector should be monitoring for efficiency of the operating systems and other safety sensitive problems.

d. In some cases, an inspector can monitor live dispatcher transactions from a remote location. This can be used as an alternative to sitting with a dispatcher and has the advantage of not disturbing the dispatcher while performing the inspections.

At the Desk Approach

Note: When conducting a desk monitoring session, it is imperative that the inspector be as unobtrusive as possible. Be sure not to ask the dispatcher questions when it will interrupt the job process.

a. Obtain necessary documentation and equipment (i.e., rules, timetables, headphones, etc.) prior to entering the dispatcher's workspace.

b. On entering the dispatcher's space, if possible, introduce yourself and give the dispatcher an idea of what you are doing. Be sure to tell the dispatcher you will be monitoring radio procedures.

c. The inspector then listens to the dispatcher, taking care to produce inspection reports on Federal regulations and rules compliance. Additionally the inspector should be monitoring for efficiency of the operating systems and other safety sensitive problems.

d. The inspector should evaluate the working systems to determine if improvements that affect safety can be made.

e. When an opportunity arises, ask the dispatcher for locations on the district where there are radio overlaps, radio congestion, signal problems, or other safety related problems. If conditions allow, ask the dispatcher how he was trained, about continuing education, road trips, rules training and operational testing.

Rules and Methods of Operation

This team should develop a short report to introduce the specific railroad operating procedures, types of mandatory directives and rules that the railroad uses to establish on-track authority.

Concerns of Employees

It is the responsibility of the team leader to accurately identify and assign the specific concerns that are brought to FRA by all entities involved. The team leader shall respond to each concern investigated and determine the validation of the concerns. Valid concerns will be incorporated into the report and resolution will be sought.

As the review continues, it will be the responsibility of the team leader to compile the information from the working groups and develop details to appraise the railroad of the preliminary findings. Depending on the team leader, and arrangements with the railroad, briefing meetings will be held on a regular (preferably daily) basis. Working group leaders and inspectors (sometimes) will be asked to attend the briefing meetings.

Whenever a regular inspection indicates a violation of Federal regulation or laws, the inspector should investigate the circumstances and brief the team leader. The inspector, team leader, audit project coordinator, and regional supervision will develop a consensus on appropriate enforcement actions.

A closeout meeting should be held with railroad management at the conclusion of the inspection or audit. Any deficiencies of railroad operating rules, Federal regulation or law, should be immediately discussed with railroad management for corrective action.

A copy of the concerns and deficiencies should be submitted to the appropriate Regional Specialist for follow-up action(s).